

### 13. GESTATIONAL DIABETES

**Author:** Guțu Laura

**Scientific adviser:** Ion Bologan, MD, Associate Professor, The Discipline of obstetrics, gynecology and human reproduction, Department of Obstetrics and Gynecology, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

**Introduction.** Gestational diabetes is defined as diabetes with onset or early diagnosis in the second or third trimester of pregnancy in previously unknown women with pre-existing type 1 or type 2 diabetes. One in six pregnant women is thought to have gestational diabetes, increasing the risk of health issues. Gestational diabetes accounts for about 90% of all diabetes-related pregnancies.

**Aim of study.** Studying the multifactorial etiology of gestational diabetes to highlight the most common causes. Analyzing the screening, diagnosis and treatment criteria to reveal their effect on maternal and neonatal outcomes.

**Methods and materials.** This study is a systematic review of data of the publication from the last 5 years. 20 publications were selected and analyzed. We used the systems: PubMed, Hindawi, NCBI, national and international guides. The research includes data from all 20 publications.

**Results.** Gestational diabetes can be caused by an increase in the level of hormones in the blood whose function is antagonistic to insulin, which leads to insulin resistance. hCG may be a determining factor in the risk of gestational diabetes. Another cause could be pancreatic  $\beta$ -cell dysfunction. Insulin resistance is one of the main pathogenetic mechanisms of gestational diabetes. Neurohormonal dysfunction has been implicated in the pathogenesis of insulin resistance present in gestational diabetes. Oxidative stress and genetic predisposition can also lead to gestational diabetes. A retrospective cohort study by Bartha et al. found that early screening for glucose intolerance could prevent diabetes-related complications such as polyhydramnios, fetal abnormalities, and premature birth in women diagnosed with gestational diabetes. Hong et al. reported that women who were tested before 20 weeks were more likely to receive insulin and give birth prematurely compared to women who were routinely tested. IADPSG recommends a one-step universal approach with a TOTG of 75 g of glucose at 24-28 weeks of pregnancy for the screening and diagnosis of gestational diabetes.

**Conclusion.** Analyzing the selected publications, we concluded that observational studies have shown contradictory results in terms of early diagnosis. The debate on the best way to screen continues, with conflicting recommendations for universal and selective screening. Most guidelines such as the ADA, WHO and FIGO recommend universal screening in countries with sufficient resources, while alternative screening strategies can be used in low-resource places. Patients with gestational diabetes should be screened early in order to monitor them, develop proper birth control, and avoid maternal and neonatal complications.